

WHAT IS CLAIMED IS:

1. A method of manufacturing a hollow shaft having a flange at one end thereof, said method comprising the steps of:

preparing a plate-like flange member having an axial projection including a constricted portion on one side thereof;

preparing a hollow shaft member having an elongate internal space arranged in the axial direction thereof;

engaging the axial projection of the plate-like flange member into a front end portion of the hollow shaft member and at the same time inserting a mandrel into the hollow shaft member;

pressing the hollow shaft member in its axial direction towards the plate-like flange member while performing a shear spinning treatment on the outer periphery surface of the hollow shaft member so as to reduce the size of the hollow shaft member in its radial direction;

engaging the front portion of the hollow shaft member with the constricted portion of the axial projection of the plate-like flange member by virtue of caulking combination.

2. The method according to claim 1, wherein a front end portion of the axial projection of the plate-like flange member has a turning-prevention structure such as a serration structure formed on its outer periphery surface.

3. The method according to claim 1 or 2, wherein the plate-like flange member and the hollow shaft member, which are to be engaged with each other by virtue of caulking combination, are made of a material containing 0.2 - 0.6 wt% of C, 0.01 - 0.1 wt% of Si, 0.05 - 0.5 wt% of Mn, 0.001 - 0.01 wt% of B, 0.01 - 0.1 wt% of Ti or Nb, with the balance being Fe, and are subjected to a heating treatment upon being combined into an integral body.